

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-6. (canceled)

7. (Previously Presented) A data processing device comprising:

a memory that stores one or more data sets and programs including one or more application programs; and

a processor that executes the programs to function as:

an object generator that generates an object containing one or more procedures of operation using at least one of the one or more data sets, the one or more procedures being called and executed by the processor in accordance with an application program stored in the memory,

a data access manager that prohibits any access to the one or more data sets by the processor running the application program stored in the memory without calling and executing a procedure contained in an object generated by the object generator, and

an object generation manager that determines whether to generate a perfect encapsulated object or an imperfect encapsulated object based on reliability of one application program among the one or more application programs, the perfect encapsulated object being an object containing no procedures of operation making a specific data set among the one or more data sets accessible by the processor running any one of the one or more application programs, the object generation manager allows the object generator to generate, in accordance with the one application program among the one or more application programs, the imperfect encapsulated object that is an object containing procedures of operation making the specific data set among the one or more data sets accessible by the processor running any one of the one or more application programs, if it is determined to generate an imperfect encapsulated object.

8. (Previously Presented) The data processing device according to claim 7, wherein the memory stores reliability information indicating degree of reliability of each of the one or more application programs, and

wherein the object generation manager determines whether to generate a perfect encapsulated object or an imperfect encapsulated object based on the reliability information stored in the memory.

9. (Previously Presented) The data processing device according to claim 7, further comprising:

a communication interface that receives from a server reliability information indicating degree of reliability of each of the one or more application programs; and

wherein the object generation manager determines whether to generate a perfect encapsulated object or an imperfect encapsulated object based on the reliability information received by the communication interface.

10. (Previously Presented) The data processing device according to claim 7, wherein the object generator generates a perfect encapsulated object when the object generator is not allowed by the object generation manager to generate the imperfect encapsulated object.

11. (Previously Presented) The data processing device according to claim 7, wherein the object generation manager determines to generate the imperfect encapsulated object only when importance of the specific data set meets a predetermined requirement.

12. (Previously Presented) The data processing device according to claim 7, wherein the data access manager does not prohibit access to the one or more data sets by the processor without calling and executing a method contained in an object generated by the object generator when the processor runs an application program that is preinstalled in the memory.

13. (Previously Presented) The data processing device according to claim 7, wherein the data access manager allows the processor to access only data sets that are stored in a memory area allotted to the one application program or in a memory area allotted to all of the one or more application programs, when the processor runs the one application.

14. (Previously Presented) The data processing device according to claim 7, wherein at least one of the one or more application programs is described as a set of intermediate codes required to be converted into executable codes before execution, and

wherein the processor that executes the programs stored in the memory to further function as a converter that converts an application program described as a set of intermediate codes into executable codes.

15. (Previously Presented) The data processing device according to claim 7, wherein the object generation manager that determines to generate an imperfect encapsulated object only when reliability of the one application meets a predetermined requirement.

16. (Previously Presented) A data processing device comprising:
a memory that stores at least one data set and at least one application program; and
a processor in communication with the memory, the processor configured to:

generate an object containing at least one procedure of operation using the at least one data set, the procedure being executed by a processor in accordance with the at least one application program stored in the memory;

analyze at least one of the application program or the data set;

determine whether to generate an imperfect encapsulated object or a perfect encapsulated object based on the analysis of the application program or the data set, the imperfect encapsulated object being an object containing one or more procedures of operation making the at least one data set accessible by the processor running the application program, the perfect encapsulated object being an object containing no procedures of operation making the at least one data set accessible by the processor running the application program;

generate the imperfect encapsulated object if it is determined whether to generate an imperfect encapsulated object; and

generate the perfect encapsulated object if it is determined whether to generate an perfect encapsulated object.

17. (Previously Presented) The data processing device of claim 16, wherein analyzing at least one aspect of the application program or the data set comprises analyzing reliability of the application program.

18. (Previously Presented) The data processing device of claim 17, wherein the at least one aspect comprises a trusted application identifier associated with the application program.

19. (Previously Presented) The data processing device of claim 16, wherein analyzing at least one aspect of the application program or the data set comprises analyzing at least one aspect of the data set.

20. (Previously Presented) The data processing device of claim 19, wherein analyzing at least one aspect of the data set comprises analyzing an importance identifier associated with at least a part of the data set.

21. (Previously Presented) The data processing device of claim 19, wherein analyzing at least one aspect of the data set comprises analyzing a storage location of the data set within the memory.

22. (Previously Presented) The data processing device of claim 16, wherein the process is further configured to execute the application program, and

wherein analyzing at least one of the application program or the data set and determining whether to generate an imperfect encapsulated object or a perfect encapsulated object when executing the application program.

23. (Previously Presented) A method for generating an encapsulated data object on a data processing device, the method comprising:

generating an object containing at least one procedure of operation using at least one data set, the procedure being executed by a processor in accordance with an application program stored in a memory;

analyzing at least one of the application program or the data set;

determining whether to generate an imperfect encapsulated object or a perfect encapsulated object based on the analysis of the application program or the data set, the imperfect encapsulated object being an object containing one or more procedures of operation making the at least one data set accessible by the processor running the application program, the perfect encapsulated object being an object containing no procedures of operation making the at least one data set accessible by the processor running the application program;

generating the imperfect encapsulated object if it is determined whether to generate an imperfect encapsulated object; and

generating the perfect encapsulated object if it is determined whether to generate an perfect encapsulated object.

24. (Previously Presented) The method of claim 23, wherein analyzing at least one aspect of the application program or the data set comprises analyzing reliability of the application program.

25. (Previously Presented) The method of claim 24, wherein the at least one aspect comprises a trusted application identifier associated with the application program.

26. (Previously Presented) The method of claim 23, wherein analyzing at least one aspect of the application program or the data set comprises analyzing at least one aspect of the data set.

27. (Previously Presented) The method of claim 26, wherein analyzing at least one aspect of the data set comprises analyzing an importance identifier associated with at least a part of the data set.

28. (Previously Presented) The method of claim 26, wherein analyzing at least one aspect of the data set comprises analyzing a storage location of the data set within the memory.

29. (Previously Presented) The method of claim 23, further comprising executing the application program; and

wherein analyzing at least one of the application program or the data set and determining whether to generate an imperfect encapsulated object or a perfect encapsulated object when executing the application program.